UK NEQAS
Leucocyte Immunophenotyping

Sheffield Teaching Hospitals NHS
NHS Foundation Trust

CD34 Stem Cell Programme

All Participant Report

Sample - 218

Distribution - 151604

Participant ID - 42981

Date Issued - 19 October 2015

Closing Date - 06 November 2015

Machine Used - Facscanto II

Trial Comments

The CD34 trial 151604 was issued to 318 participants for flow cytometric enumeration of CD34+ stem cells.

Sample Comments

The sample was manufactured by UK NEQAS using stabilised CD34+ samples and stabilised leucodepleted blood

Absolute Values Results and Performance

Please note: Performance monitoring for this programme is on absolute values only. Percentage results are shown for information purposes only.

Cell Population	Your Results (cells/µL)	Robust Mean (cells/µL)	Robust SD (cells/µL)
CD34 Absolute Values	8.33	23.26	3.32

Cell Population	z Score*	Performance Status for this Sample	Performance Status Classification Over 12 Sample Period		
			Satisfactory	Action	Critical
CD34 Absolute Values	-4.50	Critical	0	2	7

Percentage Values Results and Performance

Cell Population	Your Results %	Robust Mean %	Robust SD %
CD34 Percentage Values	0.50	0.27	0.04

Cell Population	z Score*	Performance Status for this Sample	Performance Status Classification Over 12 Sample Period		
			Satisfactory	Action	Critical
CD34 Percentage Values	5.75	Critical	1	6	2

***z Score Limits Definitions**

Please note the scale below is applicable to the tables above and to the z score histograms and Shewhart control charts that follow. It is not applicable to the Cusum control charts.

Sheffield Teaching Hospitals NHS Foundation Trust, a UKAS proficiency testing provider No. 7804, operating UK NEQAS for Leucocyte Immunophenotyping.

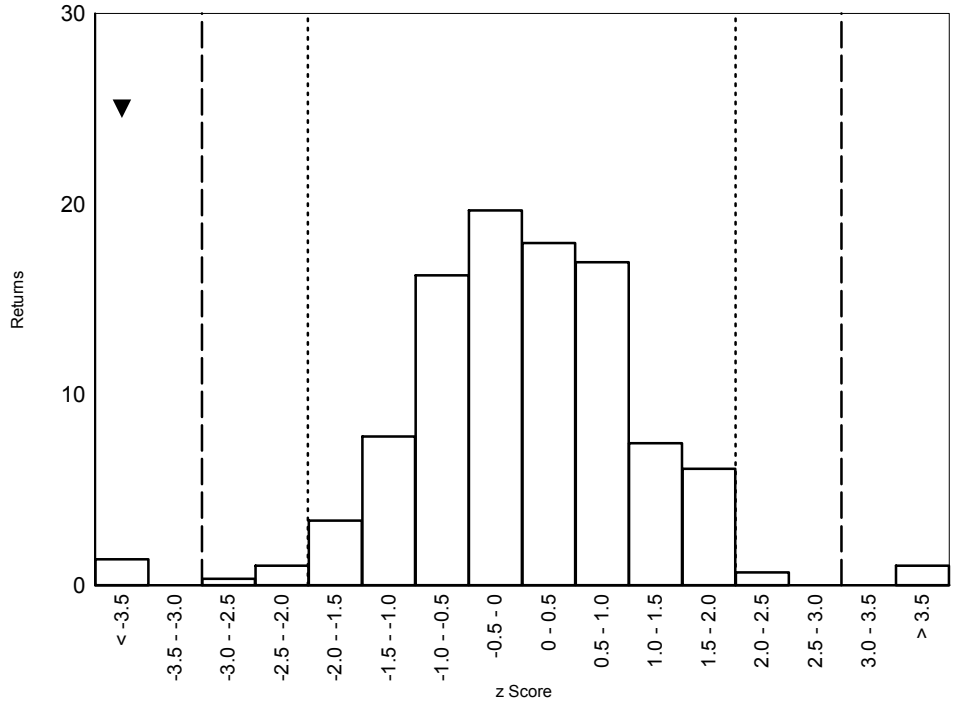
CD34 Stem Cell Programme

Sample - 218

Histograms of Participant z Scores

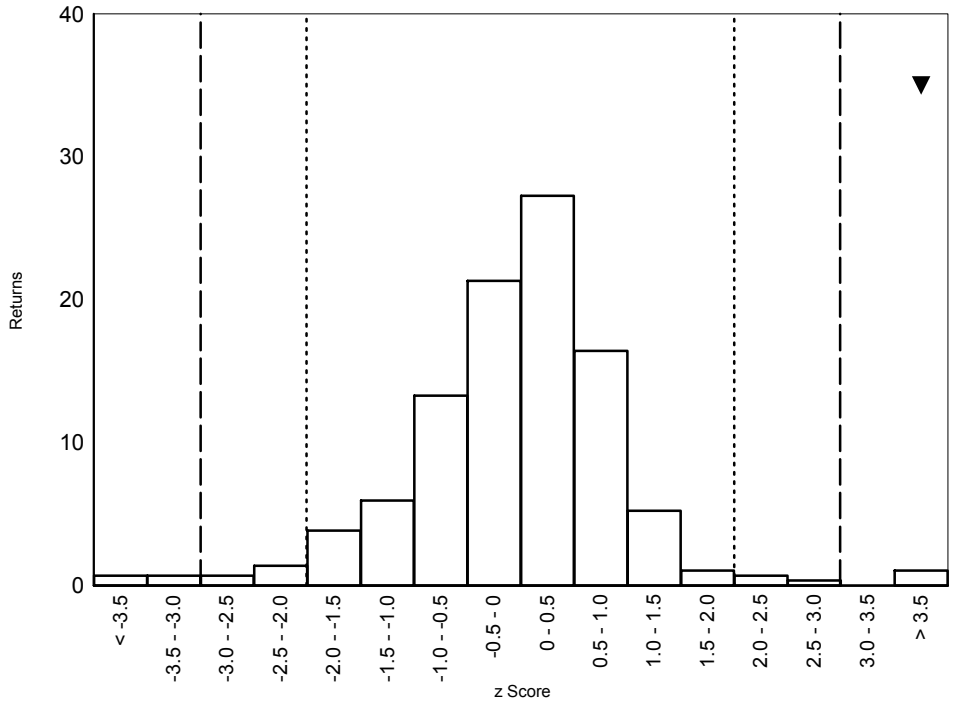
Absolute Values (cells/µL)

Please note ▼ denotes your result



Percentage Values (%)

Please note ▼ denotes your result



Sheffield Teaching Hospitals NHS Foundation Trust, a UKAS proficiency testing provider No. 7804, operating UK NEQAS for Leucocyte Immunophenotyping.

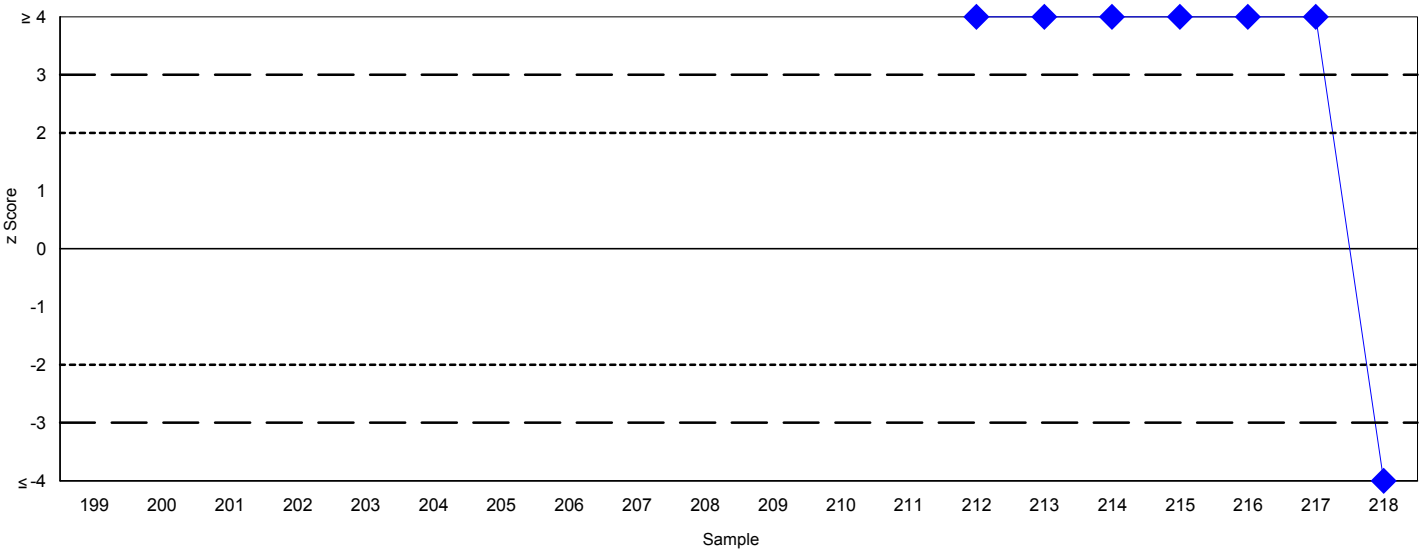
CD34 Stem Cell Programme

Sample - 218

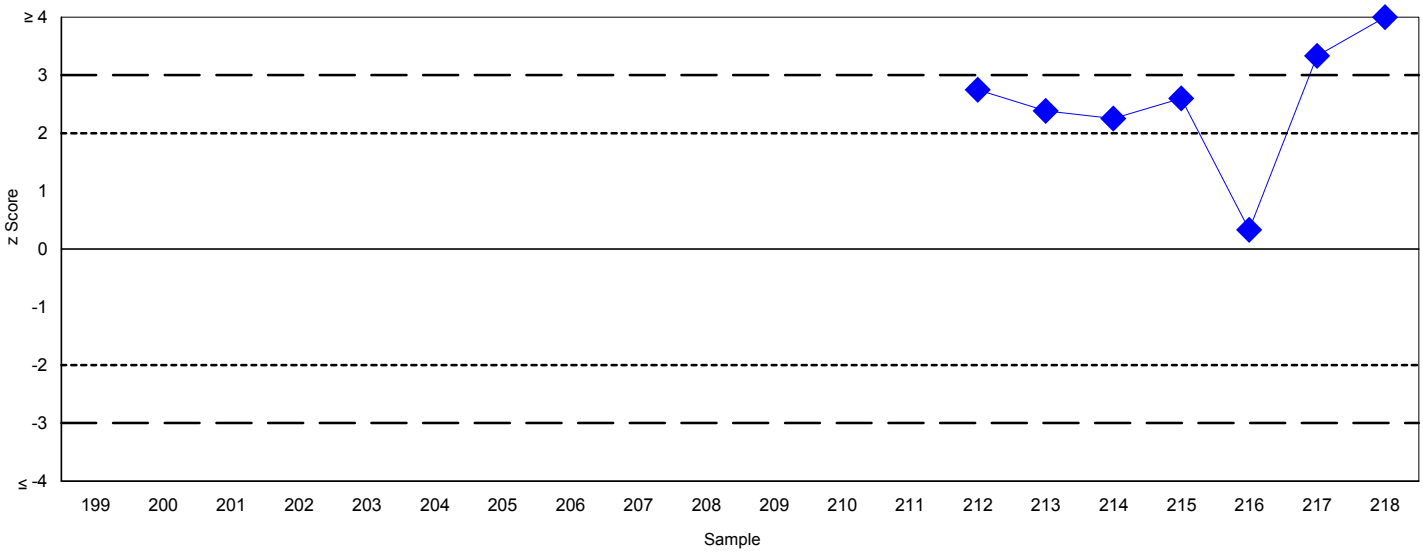
Shewhart Control Charts

(Please note each data point represents a single sample)

Absolute Values (cells/µL)



Percentage Values (%)



Sheffield Teaching Hospitals NHS Foundation Trust, a UKAS proficiency testing provider No. 7804, operating UK NEQAS for Leucocyte Immunophenotyping.

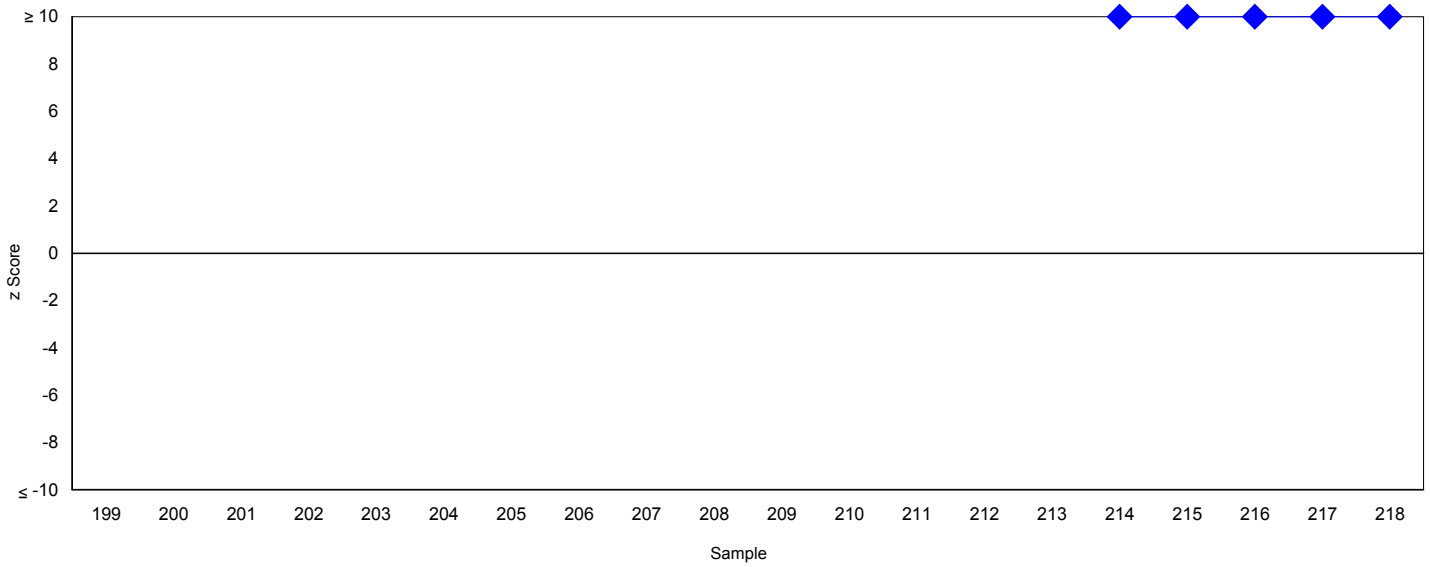
CD34 Stem Cell Programme

Sample - 218

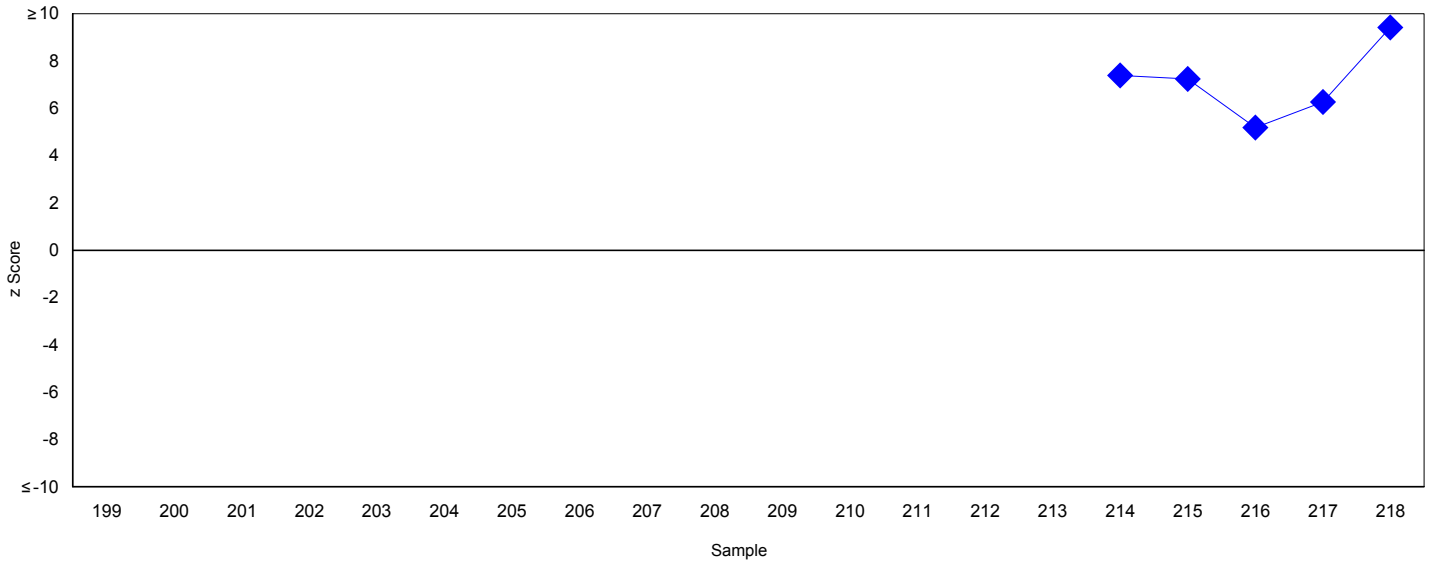
Cusum Control Charts

(Please note each data point represents the sum of the z scores of the current sample and the two previous samples)

Absolute Values (cells/µL)



Percentage Values (%)



CD34 Stem Cell Programme

Sample - 218

Platform Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
FLOW COUNT	85	23.40	3.61	85	0.27	0.03
HAEMATOLOGY ANALYSER WBC	33	23.99	3.55	33	0.28	0.04
TRUCOUNT	152	23.32	3.09	144	0.27	0.04

Lysing Method Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
Ammonium Chloride (NH4CL)	122	23.68	3.23	120	0.27	0.03
Facslyse	23	24.06	3.24	22	0.28	0.04
Pharmlyse	55	22.91	3.24	50	0.26	0.03
Stem Kit Lyse	58	22.80	3.54	57	0.27	0.04

Antibody Fluorochrome Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
PE	286	23.33	3.34	277	0.27	0.04

Flow Cytometer Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
Facscalibur	43	22.27	3.09	40	0.25	0.04
Facscanto II	112	23.78	2.87	109	0.27	0.03
FC 500.	55	23.67	3.77	55	0.27	0.04
Navios	45	22.62	3.80	45	0.26	0.03

Gating Strategy Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
BD STEM CELL ENUMERATION KIT	55	23.76	2.57	54	0.27	0.03
ISHAGE	199	23.28	3.57	191	0.26	0.04
STEM KIT	33	23.02	3.32	33	0.27	0.04

Sheffield Teaching Hospitals NHS Foundation Trust, a UKAS proficiency testing provider No. 7804, operating UK NEQAS for Leucocyte Immunophenotyping.

CD34 Stem Cell Programme

Sample - 219

Distribution - 151604

Participant ID - 42981

Date Issued - 19 October 2015

Closing Date - 06 November 2015

Machine Used - Facscanto II

Trial Comments

The CD34 trial 151604 was issued to 318 participants for flow cytometric enumeration of CD34+ stem cells.

Sample Comments

The sample was manufactured by UK NEQAS using stabilised CD34+ samples and stabilised leucodepleted blood

Absolute Values Results and Performance

Please note: Performance monitoring for this programme is on absolute values only. Percentage results are shown for information purposes only.

Cell Population	Your Results (cells/µL)	Robust Mean (cells/µL)	Robust SD (cells/µL)
CD34 Absolute Values	14.00	54.98	5.59

Cell Population	z Score*	Performance Status for this Sample	Performance Status Classification Over 12 Sample Period		
			Satisfactory	Action	Critical
CD34 Absolute Values	-7.33	Critical	0	2	8

Percentage Values Results and Performance

Cell Population	Your Results %	Robust Mean %	Robust SD %
CD34 Percentage Values	0.08	0.32	0.03

Cell Population	z Score*	Performance Status for this Sample	Performance Status Classification Over 12 Sample Period		
			Satisfactory	Action	Critical
CD34 Percentage Values	-8.00	Critical	1	6	3

***z Score Limits Definitions**

Please note the scale below is applicable to the tables above and to the z score histograms and Shewhart control charts that follow. It is not applicable to the Cusum control charts.

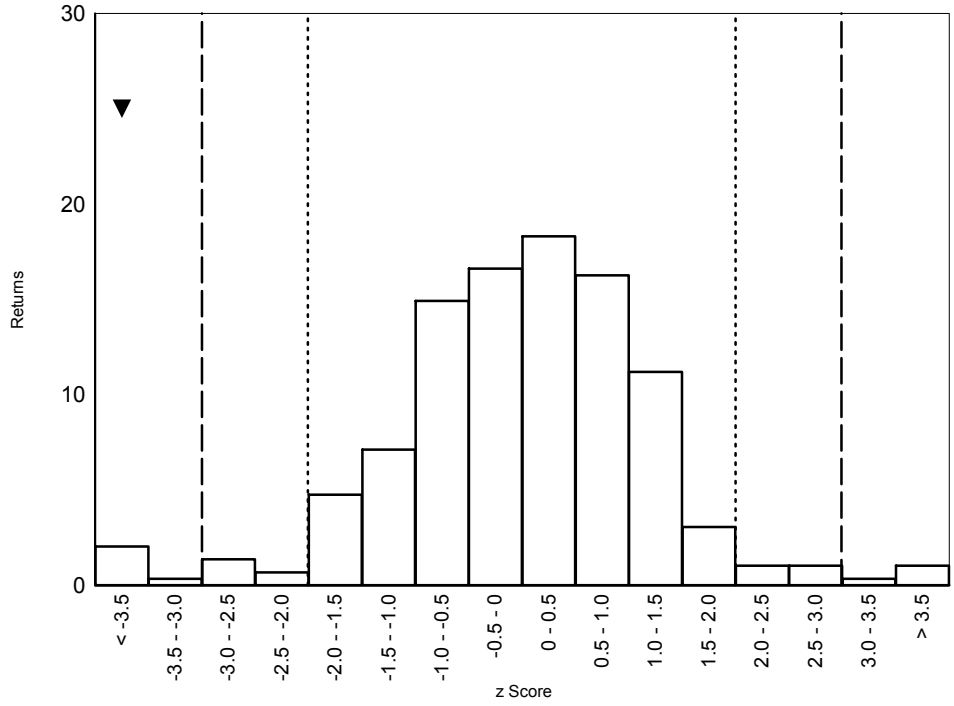
CD34 Stem Cell Programme

Sample - 219

Histograms of Participant z Scores

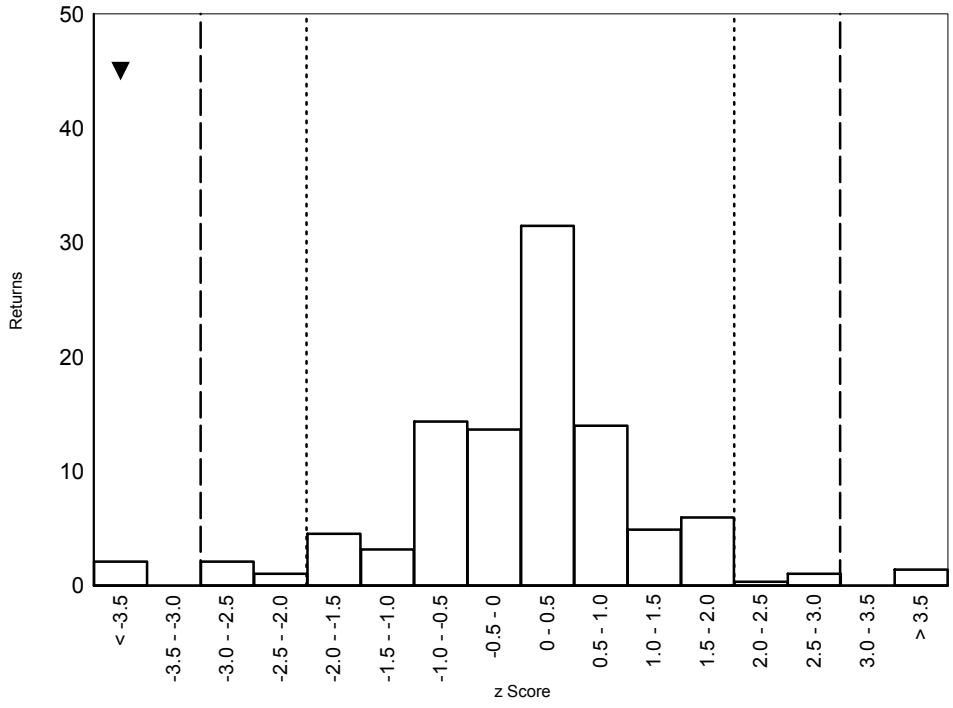
Absolute Values (cells/µL)

Please note ▼ denotes your result



Percentage Values (%)

Please note ▼ denotes your result



Sheffield Teaching Hospitals NHS Foundation Trust, a UKAS proficiency testing provider No. 7804, operating UK NEQAS for Leucocyte Immunophenotyping.

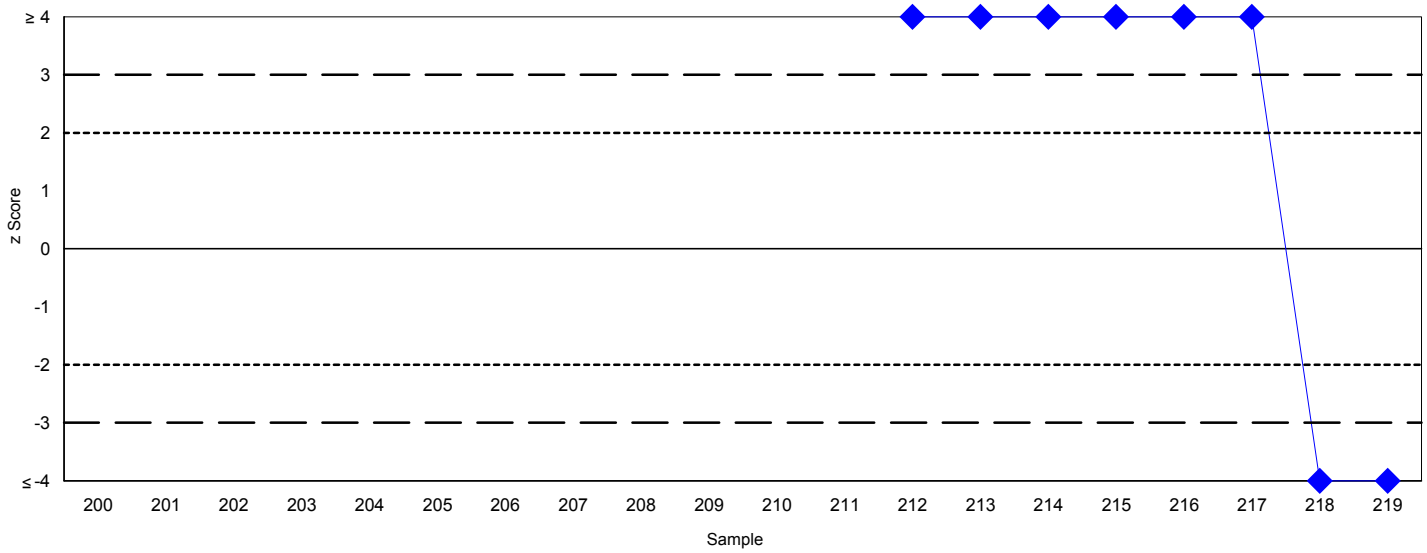
CD34 Stem Cell Programme

Sample - 219

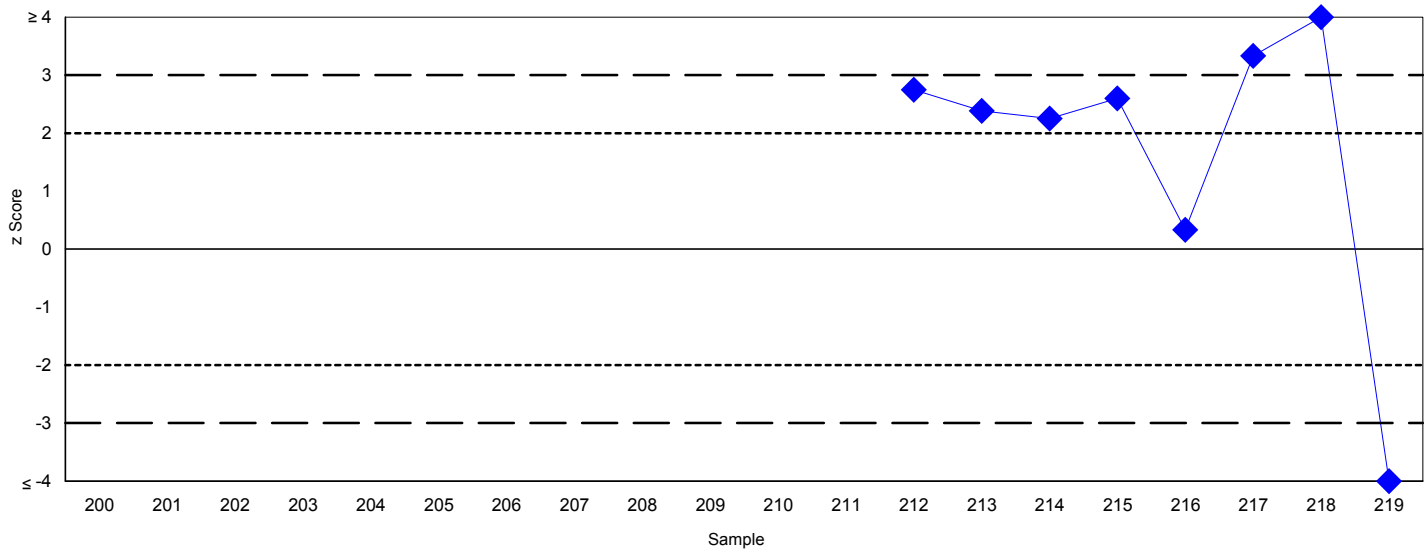
Shewhart Control Charts

(Please note each data point represents a single sample)

Absolute Values (cells/µL)



Percentage Values (%)



Sheffield Teaching Hospitals NHS Foundation Trust, a UKAS proficiency testing provider No. 7804, operating UK NEQAS for Leucocyte Immunophenotyping.

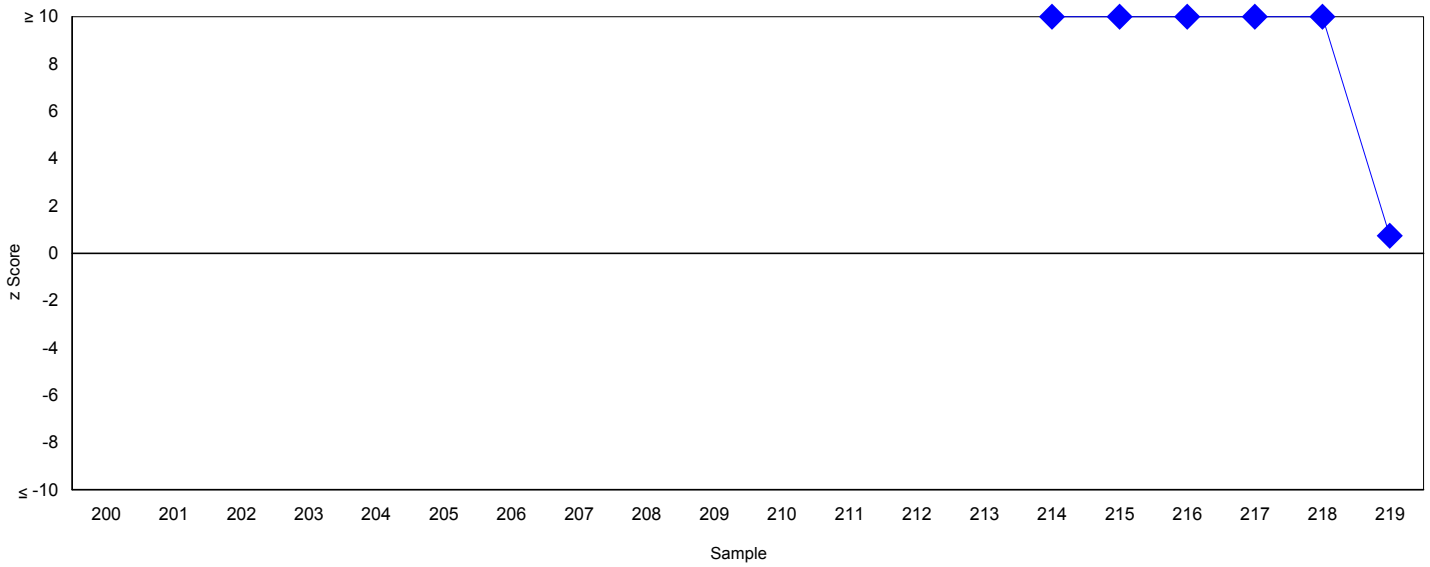
CD34 Stem Cell Programme

Sample - 219

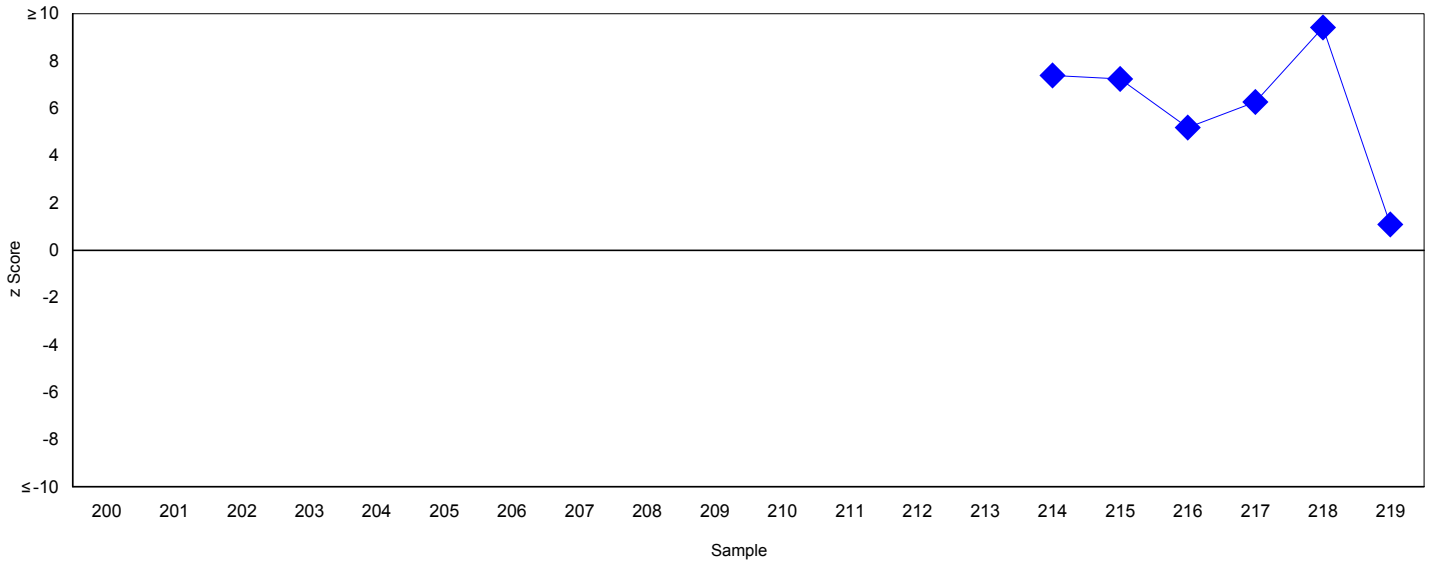
Cusum Control Charts

(Please note each data point represents the sum of the z scores of the current sample and the two previous samples)

Absolute Values (cells/µL)



Percentage Values (%)



CD34 Stem Cell Programme

Sample - 219

Platform Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
FLOW COUNT	85	54.74	5.60	85	0.32	0.03
HAEMATOLOGY ANALYSER WBC	33	55.81	6.94	33	0.32	0.03
TRUCOUNT	152	55.11	5.44	144	0.32	0.03

Lysing Method Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
Ammonium Chloride (NH4CL)	122	55.06	4.65	120	0.32	0.03
Facslyse	23	55.53	7.49	22	0.32	0.03
Pharmlyse	55	55.49	6.06	50	0.32	0.03
Stem Kit Lyse	58	54.38	6.08	57	0.33	0.03

Antibody Fluorochrome Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
PE	286	55.05	5.68	277	0.32	0.03

Flow Cytometer Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
Facscalibur	43	53.71	6.32	40	0.31	0.03
Facscanto II	112	55.86	5.49	109	0.32	0.03
FC 500.	55	54.70	6.27	55	0.33	0.03
Navios	45	55.01	5.33	45	0.32	0.02

Gating Strategy Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
BD STEM CELL ENUMERATION KIT	55	54.63	4.08	54	0.32	0.02
ISHAGE	199	55.07	6.25	191	0.32	0.03
STEM KIT	33	56.00	5.05	33	0.34	0.03

Sheffield Teaching Hospitals NHS Foundation Trust, a UKAS proficiency testing provider No. 7804, operating UK NEQAS for Leucocyte Immunophenotyping.

Information with respect to compliance with standards BS EN ISO/IEC 17043:2010

4.8.2 a) The proficiency testing provider for this programme is:
UK NEQAS for Leucocyte Immunophenotyping
Pegasus House, 4th Floor Suite
463A Glossop Road
Sheffield, S10 2QD
United Kingdom
Tel: +44 (0) 114 267 3600, Fax: +44 (0) 114 267 3601
e-mail: nicola.rose@ukneqasli.co.uk

4.8.2 b) The coordinators of UK NEQAS LI programmes are Prof David Barnett and Mr Liam Whitby.

4.8.2 c) Person(s) authorizing this report:
Prof David Barnett, Director or Mr Liam Whitby, Operations Manager of UK NEQAS LI

4.8.2 d) No activities in relation to this EQA exercise were subcontracted.

4.8.2 g) The UK NEQAS LI Confidentiality Policy can be found in the Quality Manual which is available by contacting the UK NEQAS LI office. Participant details, their results and their performance data remain confidential unless revealed to the relevant NQAAP when a UK participant is identified as having performance issues.

4.8.2 i) All EQA samples are prepared in accordance with strict Standard Operational Procedures by trained personnel proven to ensure homogeneity and stability. Where appropriate/possible EQA samples are tested prior to issue. Where the sample(s) issued is stabilised blood or platelets, pre and post stability testing will have proved sample suitability prior to issue.

4.8.2 l), n), o), r) & s) Please refer to the UK NEQAS LI website at www.ukneqasli.co.uk for detailed information on each programme including the scoring systems applied to assess performance. Where a scoring system refers to the 'consensus result' this means the result reported by the majority of participants for that trial issue. Advice on the interpretation of statistical analyses and the criteria on which performance is measured is also given. Please note that where different methods/procedures are used by different groups of participants these may be displayed within your report, but the same scoring system is applied to all participants irrespective of method/procedure used.

4.8.2 m) We do not assign values against reference materials or calibrants.

4.8.2 q) Details of the programme designs as authorized by The Steering Committee and Specialist Advisory Group can be found on our website at www.ukneqasli.co.uk. The proposed trial issue schedule for each programme is also available.

4.8.2 t) If you would like to discuss the outcomes of this trial issue, please contact UK NEQAS LI using the contact details provided.